

全項目

(19)【発行国】日本国特許庁(JP)
(12)【公報種別】登録実用新案公報(U)
(11)【登録番号】第3014841号
(24)【登録日】平成7年(1995)6月7日
(45)【発行日】平成7年(1995)8月22日
(54)【考案の名称】吸着具
(51)【国際特許分類第6版】

F16B 47/00 V

【評価書の請求】未請求

【請求項の数】2

【出願形態】書面

【全頁数】4

(21)【出願番号】実願平7-2407
(22)【出願日】平成7年(1995)2月16日
(73)【実用新案権者】
【識別番号】593225688
【氏名又は名称】大日向 和弘
【住所又は居所】秋田県由利郡東由利町宿字大琴83
(72)【考案者】
【氏名】大日向 和弘
【住所又は居所】秋田県由利郡東由利町宿字大琴83

(57)【要約】

【目的】取着面の平滑度に左右されることなく、強力な吸着力を維持できる吸着具を提供する。
【構成】吸盤本体1の中央上部にネジ軸2を植設し、該吸盤本体1の上面に該ネジ軸2を遊嵌してドーム状の押圧盤3を被蓋し、該押圧盤3の上部で前記ネジ軸2にツマミ4を螺着して成る吸着具において、吸盤本体1の吸着面5の少なくとも周縁に膨軟粘着素材6(粘着性シリコンゴム)を接着剤で一体に接合して成る。

【実用新案登録請求の範囲】

【請求項1】吸盤本体の中央上部にネジ軸を植設し、該吸盤本体の上面に該ネジ軸を遊嵌してドーム状の押圧盤を被蓋し、該押圧盤の上部で前記ネジ軸にツマミを螺着して成る吸着具において、吸盤本体の吸着面の少なくとも周縁に膨軟粘着素材を一体に配設して成る吸着具。

【請求項2】吸盤本体の中央上部にネジ軸を回動自在に植設し、該ネジ軸に回動ノブを着脱自在に一体にして成る吸着具において、吸盤本体の吸着面の少なくとも周縁に膨軟粘着素材を一体に配設して成る吸着具。

【考案の詳細な説明】

【0001】

【産業上の利用分野】

本考案は吸盤本体の真空吸着力により壁面や取付け対象面(以下、取着面という。)に被吸着物を吸着するための吸着具に関する。

【0002】

【従来の技術】

吸盤本体の中央上部にネジ軸を配設し、該ネジ軸を介して取着面に吸着する従来の吸着具は、該吸盤本体の吸着面が硬質平滑面であるため、取着面が凹凸の荒い粗面である場合には吸着できないものであった。

【0003】

【考案が解決しようとする課題】

本考案は上記に鑑み、取着面の平滑度の度合いに左右されることなく、強力な吸着力を維持できる吸着具を提供するものである。

【0004】

【課題を解決するための手段】

第1考案の吸着具は、吸盤本体の中央上部にネジ軸を植設し、該吸盤本体の上面に該ネジ軸を遊嵌してドーム状の押圧盤を被蓋し、該押圧盤の上部で前記ネジ軸にツマミを螺着して成る吸着具において、吸盤本体の吸着面の少なくとも周縁に膨軟粘着素材を一体に配設して成るものである。

【0005】

第2考案の吸着具は、吸盤本体の中央上部にネジ軸を回動自在に植設し、該ネジ軸に回動ノブを着脱自在に一体にして成る吸着具において、吸盤本体の吸着面の少なくとも周縁に膨軟粘着素材を一体に配設して成るものである。

【0006】

【作用】

粘着状の材質が粗面の凹凸になじんで食い込み、膨軟状の材質が真空力によって凹凸になじんで変形する。

【0007】

【実施例】

本考案を実施例により説明すると、図1に示すように、吸盤本体1の中央上部にネジ軸2を固定状に植設し、該吸盤本体1の上面に該ネジ軸2を遊嵌してドーム状の押圧盤3を被蓋し、該押圧盤3の上部で前記ネジ軸2にツマミ4を螺着して成る吸着具において、吸盤本体1の吸着面5の周縁(全面でもよい)に膨軟粘着素材6(粘着性シリコンゴム)を接着剤で一体に接合して成る。

【0008】

このようにして成る吸着具aは、図1の仮想線で示すように、押圧盤3とツマミ4間のネジ軸2に係着具を取着して使用に供され、平滑面は勿論のこと、凹凸のある荒い粗面でもツマミ4を介しての押圧盤3による吸盤本体1の周縁の押圧により、粘着状の材質が該凹凸になじんで食い込み、膨軟状の材質が真空力によって凹凸になじんで変形し、該粗面にきめ細かく吸着し、強力な吸着力を発現させるものである。

【0009】

次に、図2に示す吸着具bは、吸盤本体1の中央上部にネジ軸2を回動自在に植設し、該ネジ軸2に回動ノブ7を着脱自在に一体にして成る吸着具において、吸盤本体1の吸着面5の周縁(全面でもよい)に膨軟粘着素材6(粘着性シリコンゴム)を接着剤で一体に接合して成る。

【0010】

このようにして成る吸着具bも、ネジ軸2に適宜な係着具(図外)を螺着した状態で使用に供され、回動ノブ7を回動すれば、前記と同様に膨軟粘着素材6が凹凸になじんで変形するとともに、食い込み、粗面にきめ細かく吸着し、強力な吸着力が発現するものである。

【0011】

【考案の効果】

以上のように本考案の吸着具によれば、粘着状の材質が粗面の凹凸になじんで食い込み、膨軟状の材質が真空力によって該凹凸になじんで変形し、取着面の平滑度に左右されず、粗面に強力に取着できる効果がある。

【図面の簡単な説明】

【図1】本考案に係わる吸着具aの縦断面図。

【図2】本考案に係わる吸着具bの縦断面図。

【符号の説明】

1 吸盤本体

2 ネジ軸

3 押圧盤

4 ツマミ

5 吸着面

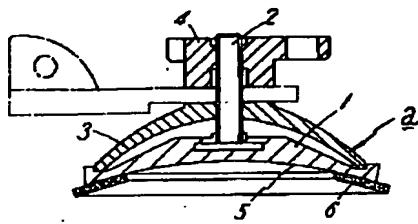
6 膨軟粘着素材

7 回動ノブ

a 吸着具

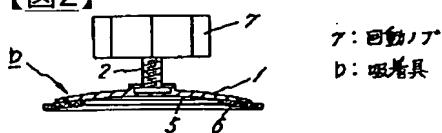
b 吸着具

【図1】



1: 吸盤本体
2: ネジ軸
3: 拡張盤
4: シマミ
5: 吸着面
6: 膨張材吸着素材
7: 吸着具

【図2】



(19) JIPO(JP)

(12) Utility Model Registration Gazette

(11) Japanese Utility Registration No. 3014841

(24) Date of Registration: June 07, 1995

5 (45) Date of Issue: August 22, 1995

(54) Title: Vacuum fixer

(51) Int'l Class: F16B 47/00

(73) Owner of Utility Model right: Omitted

(72) Devisor: Omitted

10 -----

(57) 【 Abstract 】

[Object] This design offers the adsorption implement which can maintain powerful adsorption power, without being influenced by the degree of the smoothness of an attachment side in view of the above.

[Abstract] A screw shaft is implanted in the central upper part of a sucker body, this screw shaft is fitted loosely into the top face of this sucker body, the tegmentum of the dome-like press board is carried out, a knob is set on said screw shaft in the upper part of this press board at the adsorption implement which screws on and changes, and it is the adsorption implement of the adsorption side of a sucker body which arranges a adhesion material in one and grows into a periphery at least.

25 -----

【 Utility model registration Claims 】

[Claim 1] A screw shaft is implanted in the central upper part of a sucker body, this screw shaft is fitted loosely into the top face of this sucker body, the tegmentum of the dome-like press board is carried out, a knob is set on said screw shaft in the upper part of this press board at the adsorption implement which screws on and changes, and it is the adsorption implement of the adsorption side of a sucker body which arranges an adhesion material in one and grows into a periphery at least.

[Claim 2] A screw shaft is implanted in the central upper part of a sucker body, enabling free rotation, and it sets to the adsorption implement which makes it one and grows a rotation knob into this screw shaft, enabling free attachment and detachment, and is the adsorption implement of the adsorption side of a sucker body which arranges an adhesion material in one and grows into a periphery at least.

【 Detailed explanation of a design 】

20 [0001]

[Industrial Application]

This design is related with the adsorption implement for adsorbing the adsorbate by the vacuum adsorption power of a sucker body in a wall surface or the field for anchoring (henceforth an attachment side).

[0002]

[Description of the Prior Art]

Since the adsorption side of this sucker body was a hard smooth side, the conventional adsorption implement which 5 arranges a screw shaft in the central upper part of a sucker body, and sticks to an attachment side through this screw shaft was that to which it cannot stick, when an attachment side was a split face where irregularity is rude.

[0003]

10 [Problem(s) to be Solved by the Device]

This design offers the adsorption implement which can maintain powerful adsorption power, without being influenced by the degree of the smoothness of an attachment side in view of the above.

15 [0004]

[Means for Solving the Problem]

The adsorption implement of the 1st design is a thing of the adsorption side of a sucker body which arranges an adhesion material in one and grows into a periphery at least in the 20 adsorption implement which implants a screw shaft in the central upper part of a sucker body, fits this screw shaft loosely into the top face of this sucker body, carries out the tegumentum of the dome-like press board, screws a knob on said screw shaft and grows into it in the upper part of this 25 press board.

[0005]

The adsorption implement of the 2nd design is a thing of the adsorption side of a sucker body which arranges a adhesion material in one and grows into a periphery at least in the 5 adsorption implement which implants a screw shaft in the central upper part of a sucker body, enabling free rotation, makes it one and grows a rotation knob into this screw shaft, enabling free attachment and detachment.

[0006]

10 [Function]

The quality of the material of the letter of adhesion gets used and eats into the irregularity of a split face, and the quality of the material gets used and deforms into irregularity according to the vacuum force.

15 [0007]

[Example]

If an example explains this design, as shown in drawing 1 , the screw shaft 2 will be implanted in the central upper part of the sucker body 1 in the shape of immobilization. In the 20 adsorption implement which fits this screw shaft 2 loosely into the top face of this sucker body 1, carries out the tegmentum of the dome-like press board 3, screws a knob 4 on said screw shaft 2, and grows into it in the upper part of this press board 3 The adhesion material 6 (adhesive silicone 25 rubber) is joined to one with adhesives, and it grows into

the periphery (the whole surface is sufficient) of the adsorption side 5 of the sucker body 1.

[0008]

As the imaginary line of drawing 1 shows, the adsorption
5 implement a which changes attaches an engagement implement in
the screw shaft 2 between the press board 3 and a knob 4, and
use is presented with it. Thus, not to mention a smooth side
By press of the periphery of the sucker body 1 by the press
board 3 through a knob 4, the quality of the material of the
10 letter of adhesion gets used and eats into this irregularity
even in an irregular rude split face, the material gets used
and deforms into irregularity according to the vacuum force,
it sticks to this split face finely, and powerful adsorption
power is made to discover.

15 [0009]

Next, the adsorption implement b shown in drawing 2 is
implanted in the central upper part of the sucker body 1 for
the screw shaft 2, enabling free rotation, in the adsorption
implement which carries out at one and changes, joins the
20 adhesion material 6 (adhesive silicone rubber) to the
periphery (the whole surface is sufficient) of the adsorption
side 5 of the sucker body 1 with adhesives at one, and grows
the rotation knob 7 into it at this screw shaft 2, enabling
free attachment and detachment.

25 [0010]

Thus, if use is presented after the adsorption implement b which changes has screwed the proper engagement implement (outside of drawing) on the screw shaft 2, and the rotation knob 7 is rotated, while the adhesion material 6 will get used and deform into irregularity like the above, it eats away, and sticks to a split face finely, and powerful adsorption power is discovered.

[0011]

[Effect of the Device]

10 As mentioned above, according to the adsorption implement of this design, the material of the letter of adhesion gets used and eats into the irregularity of a split face, the material gets used and deforms into this irregularity according to the vacuum force, and it is not influenced by the smoothness of
15 an attachment side, but there is effectiveness which can be powerfully attached in a split face.

【 Brief Description of the Drawings 】

[Drawing 1] Drawing of longitudinal section of the adsorption implement a concerning this design.

[Drawing 2] Drawing of longitudinal section of the adsorption implement b concerning this design.

[Description of Notations]

1 ; Sucker Body

25 2 ; Screw Shaft

3 ; Press Board

4 ; Knob

5 ; Adsorption Side

6 ; Adhesion Material

5 7 ; Rotation Knob

a - Adsorption implement, b - Adsorption implement

【 Drawings 】

Omitted

10